

Art Unit: 1795

DETAILED ACTION

This Office action is in response to an error of the pending claims and the need for consideration of new claims 13-16 as pointed out by applicant's attorney.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by RUSHKIN et al (6,929,891).

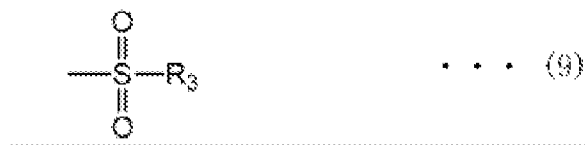
The claimed invention is drawn to the following:

Art Unit: 1795

1. (Currently amended) A photosensitive resin composition comprising:

(A) a polymer having an acid functional group and/or a substituent derived therefrom;

(B) a compound having at least one substituent derived from an amine functional group, wherein said at least one substituent is selected from the group consisting of:



wherein R₃ represents a monovalent organic group; X₃ represents an oxygen, sulfur, or nitrogen atom; and n represents 1 when X₃ is an oxygen atom or a sulfur atom, or n represents 2 when X₃ is a nitrogen atom;

(C) a photoreactive compound; and

(D) a solvent.

RUSHKIN et al anticipates the claimed photosensitive resin composition by disclosing said polymer having an acid functional group and/or a substituent derived therefrom, a compound having at least one substituent derived from an amine functional group, a photoreactive compound and a solvent, see Example 1 and 3 found in column 23 and 25, respectively.

Art Unit: 1795

The polybenzoxazole and the other components of the photosensitive resin are included in column 3, lines 28-68 wherein a latent crosslinker as defined as ingredient (c) meets the claimed, while the photoactive compounds meet the claimed photoreactive compound.

The claimed invention remains anticipated wherein the polymer resin in RUSHKIN et al comprises various molecular weight pieces or resin which would meet the claimed ingredient B., see the end-capped polyamic acid as seen in column 23/24, lines 1-17 wherein the end unit anticipates the claimed ingredient B and can be considered a compound.

3. Claims 13-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over RUSHKIN et al (6,929,891).

Art Unit: 1795

The new claims 13, 15 and 16 are drawn to the following:

13. (New) The photosensitive resin composition according to claim 1, wherein said R_3 is a monovalent organic group having 1 to 20 carbon atoms.

14. (New) The photosensitive resin composition according to claim 1, wherein said compound of the component (B) serves as a chain extender capable of increasing molecular weight of said polymer of the component (A) during a heat treatment of the photosensitive resin composition.

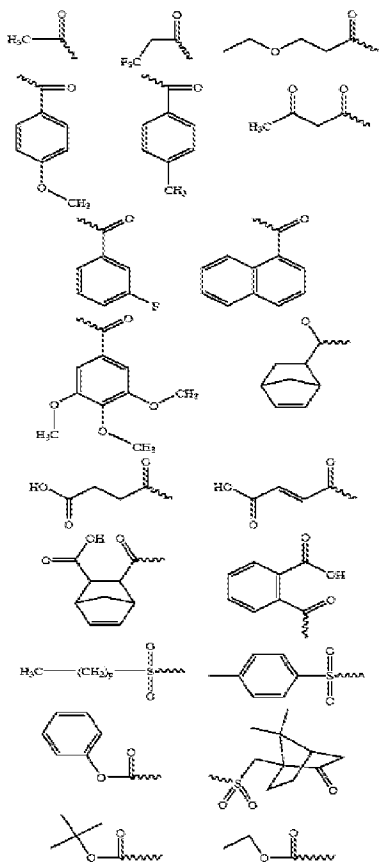
15. (New) The photosensitive resin composition according to claim 1, which contains 0.05 to 50 parts by weight of said compound of the component (B) relative to 100 parts by weight of said polymer of the component (A).

16. (New) The photosensitive resin composition according to claim 1, which contains 0.2 to 20 parts by weight of said compound of the component (B) relative to 100 parts by weight of said polymer of the component (A).

RUSHKIN et al fails to explicitly disclose parts by weight of the compound for component B in claims 15 and 16; however the reference inherently discloses the presence of a plurality of molecular weight components of the polybenzoxazole polymer which would meet the newly added limitations in claims 13, 15 and 16 for the weight percent. In a similar regard the reference fails to explicitly disclose the claimed chain extending properties of component B

Art Unit: 1795

as recited in claim 13, however the same end groups are disclosed on the polybenzoxazoles as seen below from column 6, lines 5-62 wherein the same type of end group would possess the same properties as currently claimed due to the inseparable nature of the chemical compounds and their properties.



It would have been *prima facie* obvious to one of ordinary skill in the art of photoresist compositions to duplicate the disclosed composition in RUSHKIN et al with reasonable expectation of same or similar results as disclosed in RUSHKIN et al for excellent imaging properties.

Art Unit: 1795

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUSHKIN et al (6,929,891).

The claimed invention has been recited above and is included by reference.

Each of the recited components is disclosed in the reference to RUSHKIN et al such that it would be *prima facie* obvious to the skilled artisan to duplicate the composition of RUSHKIN et al for the purpose of having a composition which is excellent in imaging properties and suitable for high temperature resistant pattern formation.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. KIHARA et al (5,756,254) are disclosed of interest wherein a resist composition is disclosed comprising crosslinking compounds.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 1795

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/
Primary Examiner, Art Unit 1795

J.Chu
October 20, 2009